

Marked-up copies of the amended and new claims appear following the signature page. (In that later presentation, for the Examiner's convenience all the claims have been placed in the claim sequence at the points where desired — in particular, with claims 50 through 52 out of numerical order.)

FI

1 1. (twice amended) An incremental printer for forming
2 desired images on a printing medium, by construction from
3 individual marks in arrays; said printer comprising:
4 at least one colorant-placing module for marking on
5 such medium;
6 a colorant carriage for holding and moving the at least
7 one colorant-placing module over such medium;
8 a motor and drive train for propelling said carriage
9 over such medium;
10 a first sensor, mounted to said carriage, for determin-
11 ~~ing condition or relative positioning of the~~ at least one
12 colorant-placing module;
13 a second sensor for making color measurements of mark
14 arrays formed on such medium by the at least one module;
15 an auxiliary carriage for holding and moving the second
16 sensor over such medium; said auxiliary carriage being
17 selectively attachable to and detachable from the colorant
18 carriage, but having substantially no drive train other
19 than that of the colorant-carriage drive train; and
20 means for controlling the motor and drive train, while
21 the carriages are attached, to position the colorant car-
22 riage and thereby the auxiliary carriage for substantially
23 stationary measurement of such a mark array on such medium.

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1 8. (thrice amended) An incremental printer for forming
2 desired images on a printing medium, by construction from
3 individual marks in arrays; said printer comprising:
4 at least one colorant-placing module for marking on
5 such medium;
6 a first sensor for determining condition or relative
7 positioning of the at least one colorant-placing module;
8 a second sensor for making color measurements of mark
9 arrays formed on such medium by the at least one module;
10 and
11 a mechanism for advancing the second sensor into a
12 measurement position at only low velocity and only low
13 positioning accuracy needed for roughly positioning the
14 second sensor over successive colorimetric test-pattern
15 patches in turn;
16 wherein said low velocity is on the order of a fraction
17 of 13 cm (5 inches) per second; and
18 said low accuracy is on the order of the dimension of
19 an individual mark.

1 9. (twice amended) An incremental printer for forming
2 desired images on a printing medium, by construction from
3 individual marks in arrays; said printer comprising:
4 at least one colorant-placing module for marking on
5 such medium;
6 a colorant carriage for holding and moving the at least
7 one colorant-placing module over such medium;
8 a motor and drive train for propelling said carriage
9 over such medium;
10 a first sensor, mounted to said carriage, for determin-
11 ing condition or relative positioning of the at least one
12 colorant-placing module;
13 a second sensor for making color measurements of mark
14 arrays formed on such medium by the at least one module;
15 an auxiliary carriage for holding and moving the second
16 sensor over such medium; said auxiliary carriage being
17 selectively attachable to and detachable from the colorant
18 carriage, but having substantially no drive train other
19 than that of the colorant-carriage drive train;
20 means for controlling the motor and drive train, while
21 the carriages are attached, to position the colorant car-
22 riage and thereby the auxiliary carriage for substantially
23 stationary measurement of such a mark array on such medium;
24 and
25 a mechanism for advancing a component associated with
26 the second sensor into contact with such medium.

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1 11. (twice amended) An incremental printer for forming
2 desired images on a printing medium, by construction from
3 individual marks in arrays; said printer comprising:

4 at least one colorant-placing module for marking on
5 such medium;

6 a first carriage for holding and moving the at least
7 one colorant-placing module over such medium; and

8 a motor and drive train for propelling said first
9 carriage over such medium;

10 a second carriage, discrete from the first carriage,
11 for use in refining the quality of images produced by the
12 printer; said auxiliary carriage being selectively attach-
13 able to and detachable from the first carriage, but having
14 substantially no drive train other than that of the first-
15 carriage drive train; and

16 means for controlling the motor and drive train, while
17 ~~the carriages are attached,~~ to position the first carriage
18 and thereby the second carriage for substantially station-
19 ary operation in refining the quality of images.

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1 14. (twice amended) An incremental printer for forming
2 desired images on a printing medium, by construction from
3 individual marks in arrays; said printer comprising:
4 at least one colorant-placing module for marking on
5 such medium;
6 a first carriage for holding and moving the at least
7 one colorant-placing module over such medium at a speed for
8 marking; and
9 a second carriage, discrete from the first carriage,
10 for use in refining the quality of images produced by the
11 printer;
12 wherein the second carriage scans a sensor over such
13 medium at only low velocity and only low positioning accu-
14 racy needed for roughly positioning the second sensor over
15 successive colorimetric test-pattern patches in turn;
16 said low velocity is a fraction of said marking speed;
17 and
18 said low accuracy is on the order of the dimension of
19 an individual mark.

1 50. (amended) the printer of claim 8, wherein:
2 the low positioning accuracy is a fraction of said
3 dimension.

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cont'd

1 51. (amended) The printer of claim 14, wherein:
2 said low velocity is a fraction of 13 cm (5 inches) per
3 second; and
4 the low positioning accuracy is a fraction of said
5 dimension.

1 52. (amended) An incremental printer for forming desired
2 images on a printing medium, by construction from individu-
3 al marks in arrays; said printer comprising:
4 at least one colorant-placing module for marking on
5 such medium;
6 a colorant carriage for holding and moving the at least
7 one module over such medium;
8 a motor and drive train for propelling said carriage
9 over such medium;
10 a first sensor, mounted to said carriage, for determin-
11 ing condition or relative positioning of the at least one
12 colorant-placing module;
13 a second sensor for making color measurements of mark
14 arrays formed on such medium by the at least one module;
15 an auxiliary carriage for holding and moving the second
16 sensor over such medium; said auxiliary carriage being
17 ~~selectively attachable to and detachable from the colorant~~
18 ~~carriage, but having substantially no drive train other~~
19 ~~than that of the colorant-carriage drive train; and~~
20 a mechanism for advancing a component associated with
21 the second sensor into contact with such medium.

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end

REMARKS

Applicants thank Examiner Julian D. Huffman for having allowed thirty claims and for having indicated that approximately six others would be allowed if suitably amended. Applicants have so amended those claims, and believe that they are now in condition for allowance.